Apple in the Enterprise

The Power of Open Source;
The Simplicity of the Mac

Bud Tribble
Vice President Software Technology

IT Technology Decisions

IT Technology Decisions

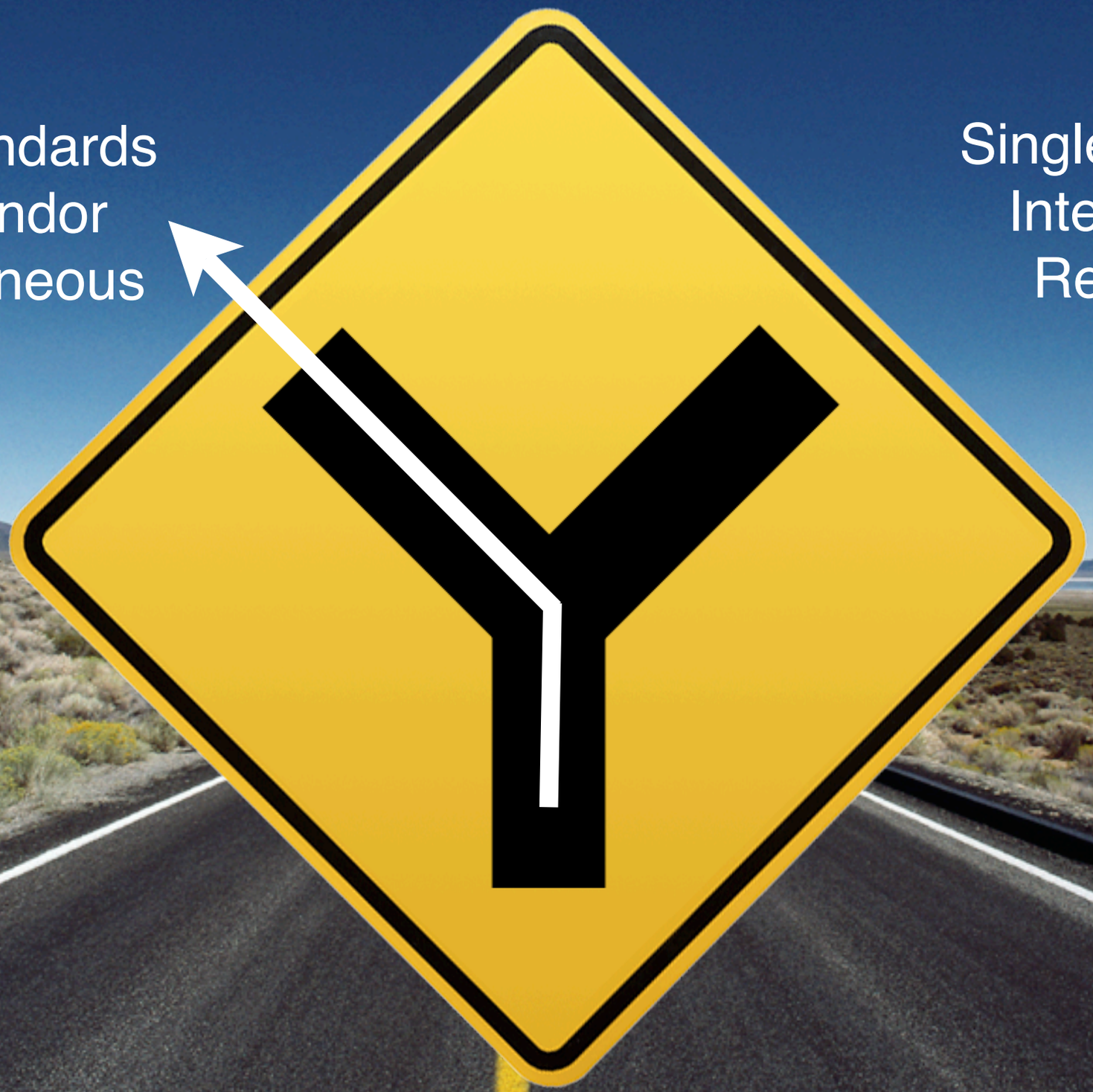
Open Standards
Multi-vendor
Heterogeneous

Single Vendor
Integrated
Reliable

Open Source-Based Solutions Are an Alternative to the Status Quo

Open Standards
Multi-vendor
Heterogeneous

Single Vendor
Integrated
Reliable



Benefits of Open Source

- Cost Savings
- Interoperability
- Source Code Access
- Security Resolutions and Audits
- Code Re-use
- Deep Talent Pool

WARNIN
NY7

CRM

PHP-Nuke
advanced content management system

MOLMOL

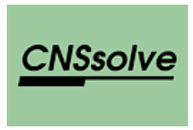
filmGIMP

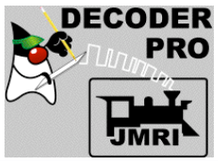
asp2php

SpamAssassin

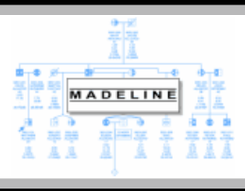
GTK+OSX

DELIVERED BY:
MAILMAN
MAIL LISTS

campware

CNSsolve

BZFLAG

DECODER
PRO
JMRI

TYRELL
High Performance
Development Solutions


MADELINE

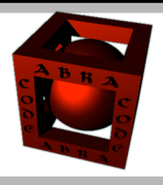
mkconsole.

Databrevity

Army Research Laboratory
BRL-CAD

netatalk

SCM


ABRA
CODE

PhpDig

WebMol

Jmol

jDictionary

Xtools
X Window Server

X

Cocoa nuts

Eden Systems LLC

JAdvisor

OpenOffice.org
Source Project

In a Perfect World

- Benefits of open source
- Reliability and support
- Ease of deployment
- Low total cost of ownership

The Power of Open Source;
The Simplicity of the Mac

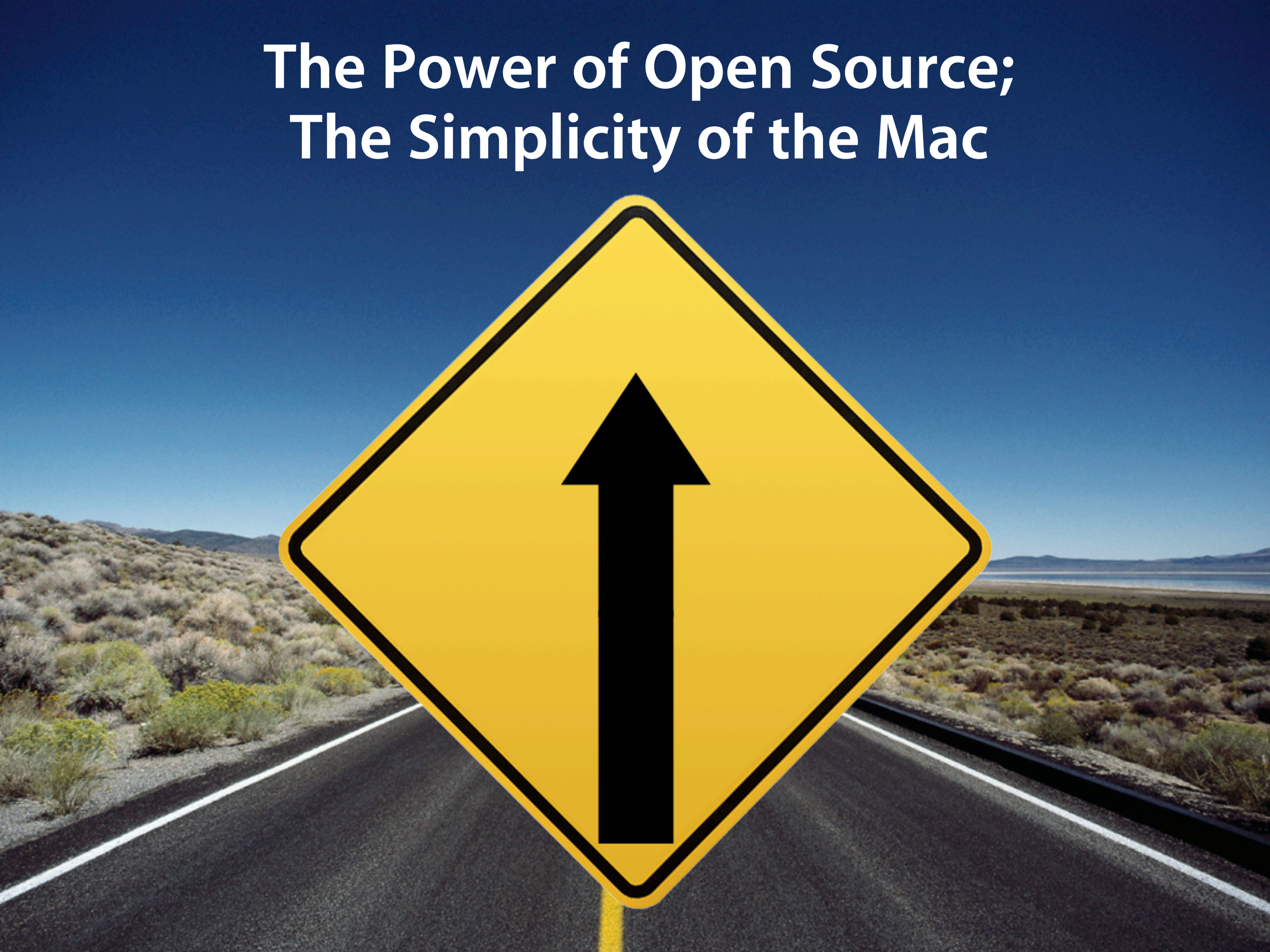
Based on open source

Support for open standards

Simplicity of deployment and management

Backed by Apple

The Power of Open Source; The Simplicity of the Mac



The Power of Open Source;
The Simplicity of the Mac

The Power of Open Source; The Simplicity of the Mac

File and Printer Sharing
- Macintosh (AFP, PAP)
- Windows (SMB/CIFS—Samba)
- Internet (FTP, WebDAV)
- UNIX and Linux (NFS, LPR/LPD)

Workgroup Management
- Workgroup Manager
- NetBoot
- Network Install

Internet Services
- Apache web server
- Mail (SMTP, POP, IMAP)
- Web mail
- QuickTime Streaming Server
- QuickTime Broadcaster

Networking and Security
- IP firewall
- DHCP server
- DNS server

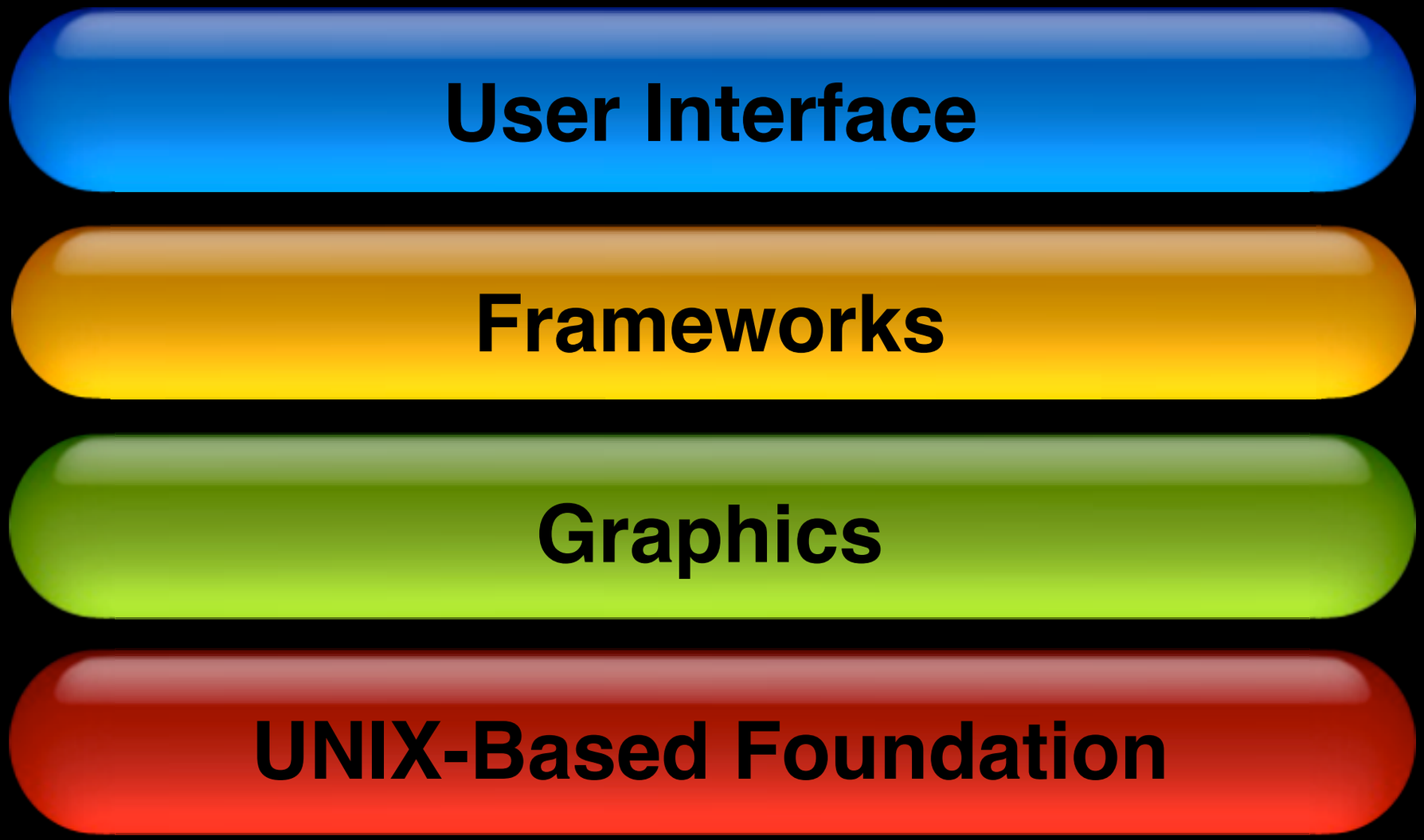
Directory Services
- Open Directory (LDAPv3)
- Password Server (SASL)
- Kerberos v5 (AFP, FTP, Mail)

Web Technologies
- WebObjects 5.2
- Java (J2SE)
- JSPs, Servlets—Tomcat
- PHP, Ruby, MySQL
- SOAP, XML-RPC—Axis

Software

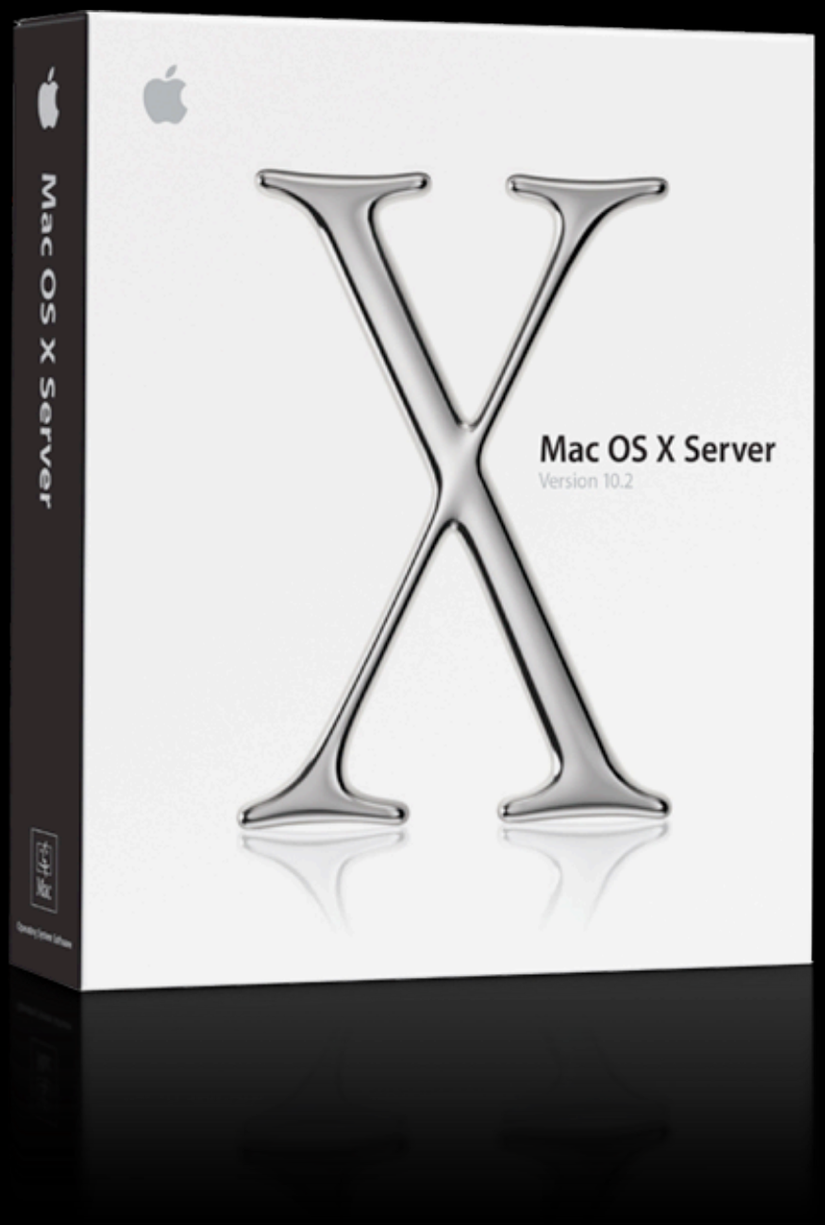
Mac OS X

The Mac Advantage



End-User Enterprise Applications

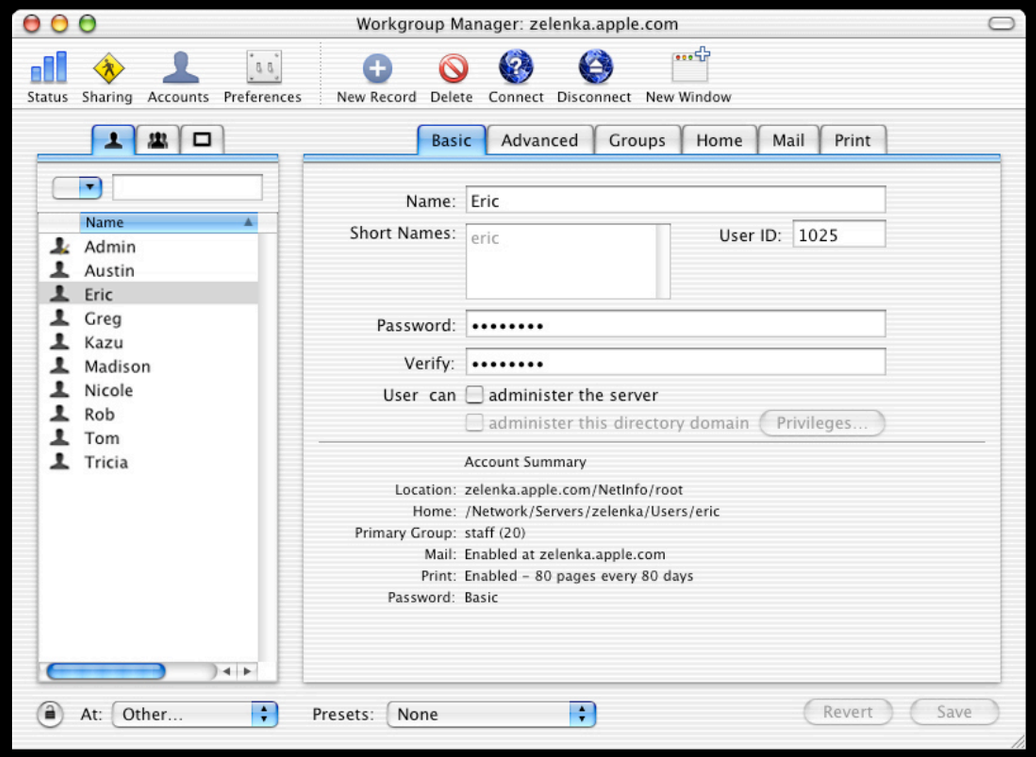
Mac OS X Server “Jaguar”

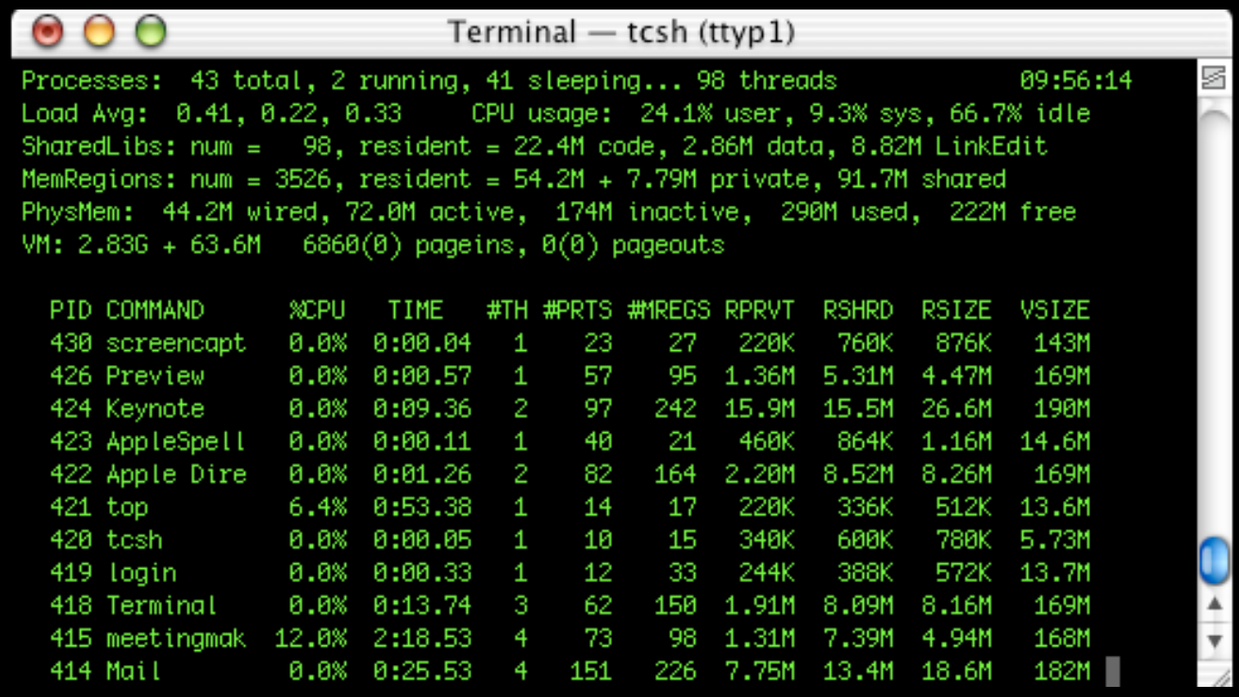


Mac OS X Server

Security	Directory	Web	Mail	File	Print	Terminal
SASL Kerberos	LDAPv3	HTTP SOAP	IMAP POP WEB	AFP SMB NFS	IPP LPR A/T	SSH

Mac Means Manageability





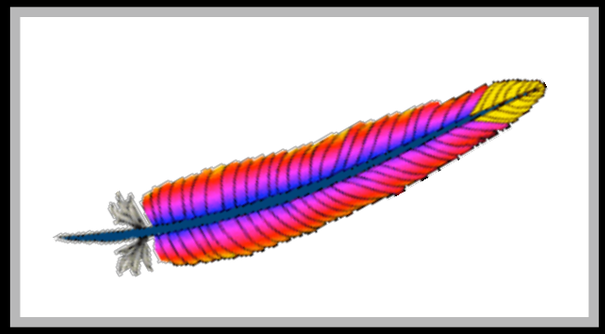
SNMP:

Tivoli

hp invent

ca Computer Associates™

Tools for the Enterprise Developer

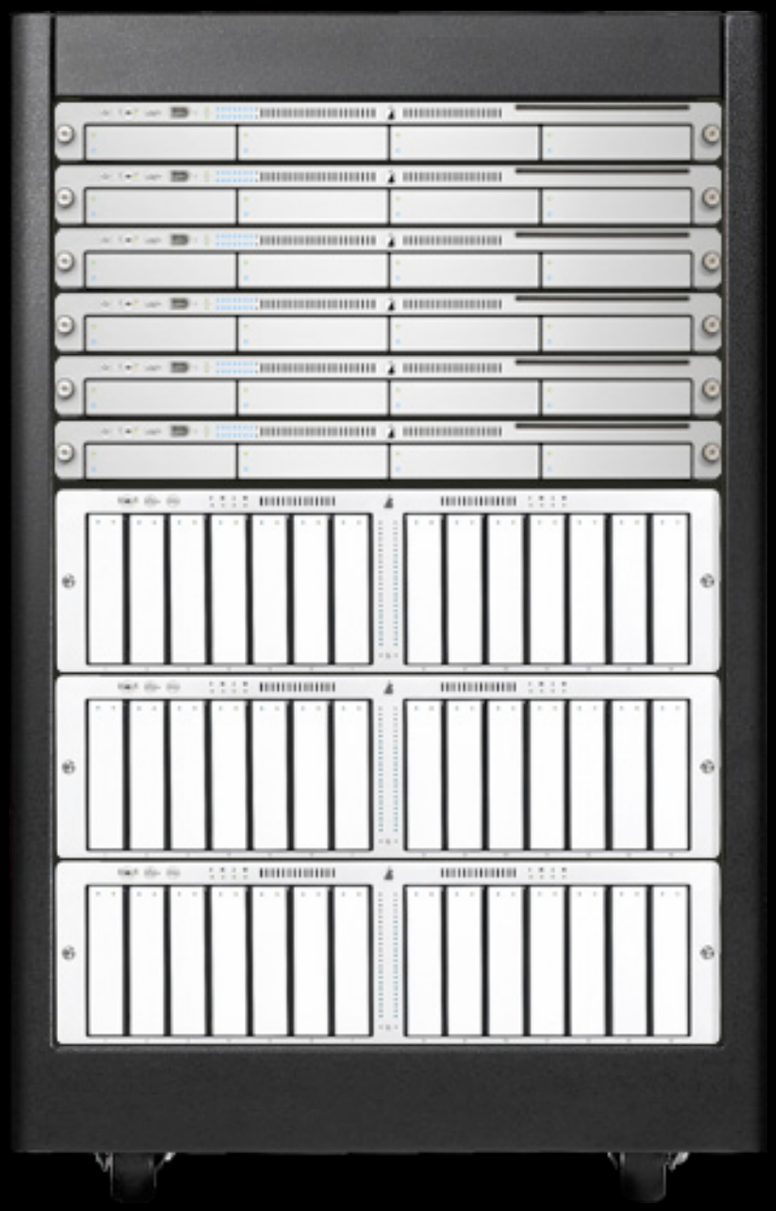


Tools for the Enterprise Developer

Java	J2SE, JBoss
Web Applications	Safari, JBoss, WebObjects, Apache, Tomcat
Scripting	AppleScript, SSI, Ruby, PHP, Perl, Tcl, sh, tcsh
Open Source	Xcode, gcc, gdb, CVS
Commercial ISV	Cocoa, Carbon, Xcode, Java, WebObjects, MySQL

Hardware

Xserve and Xserve RAID



AppleCare

AppleCare Protection Plan
AppleCare
Protection Plan
• Up to three years of Apple telephone support and Apple-certified repairs
• Onsite service for desktop computers*
• Global repair coverage for portable computers
• Dedicated access to web-based resources
• Powerful diagnostic tools: TechTool Deluxe from Micromat

Partners

Announcements Today

ORACLE

webMethods
The Business Integration Company

iAnywhere SOLUTIONS™
A SYBASE COMPANY

BUSINESS OBJECTS®

IBM

LEGATO

SAP

Microsoft

ORACLE

SYBASE

PEOPLE Soft

MySQL

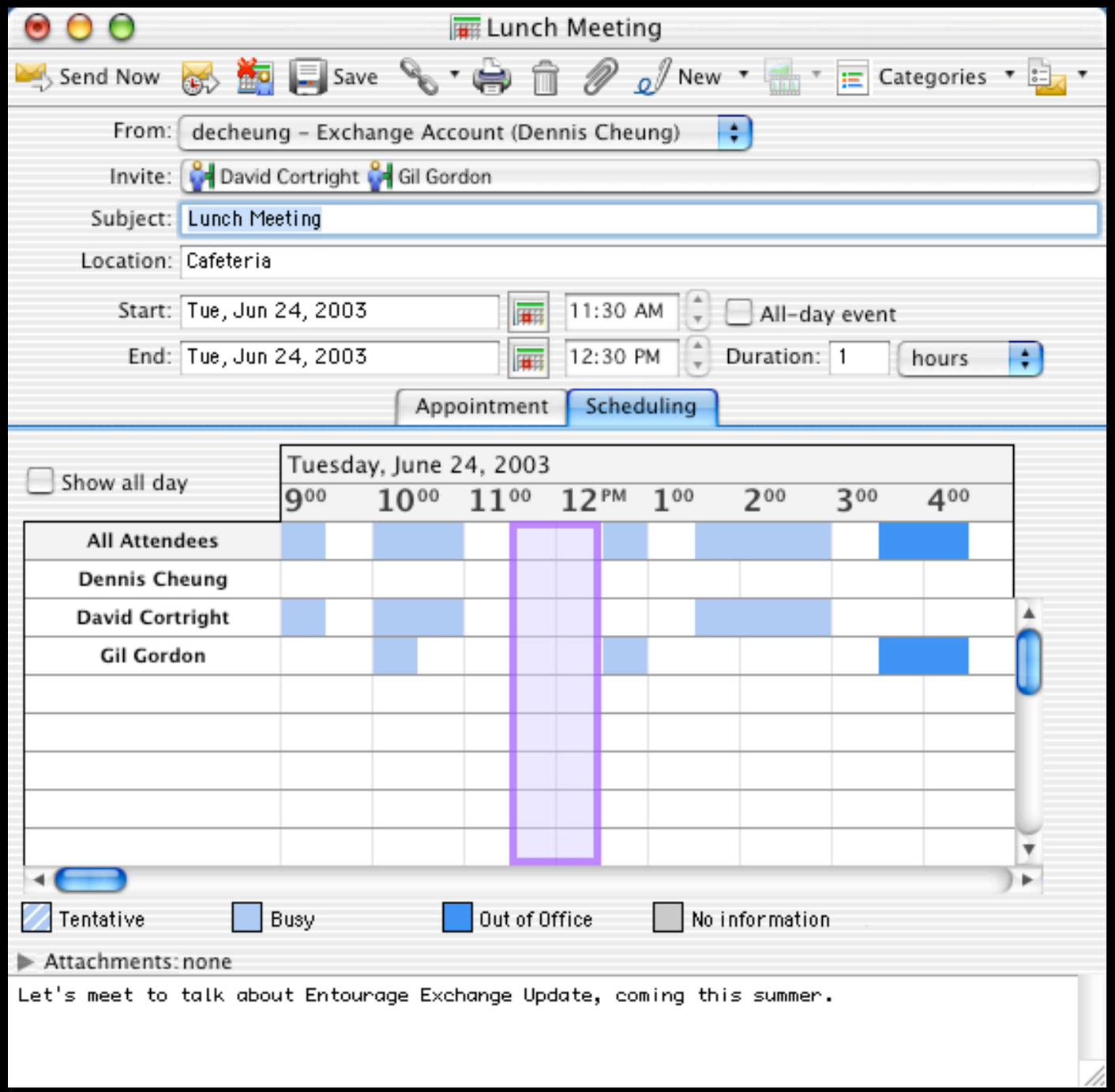
BUSINESS OBJECTS

Lotus

webMethods
The Business Integration Company

Tivoli

Coming Soon…
Microsoft Exchange Support



Customers

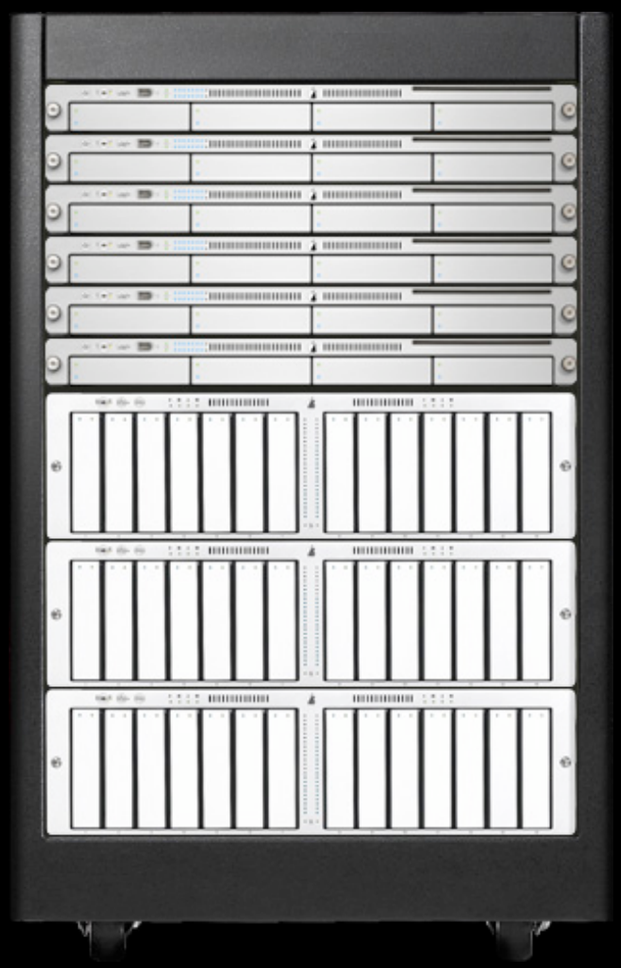
Entertainment

Life Sciences

Higher Education

Government

RiskWise™



RiskWise

Real-time credit verification and risk management services

- 190 Xserve systems and growing, 15 Xserve RAID
- 1 million transactions processed every day
- 99.999% service availability

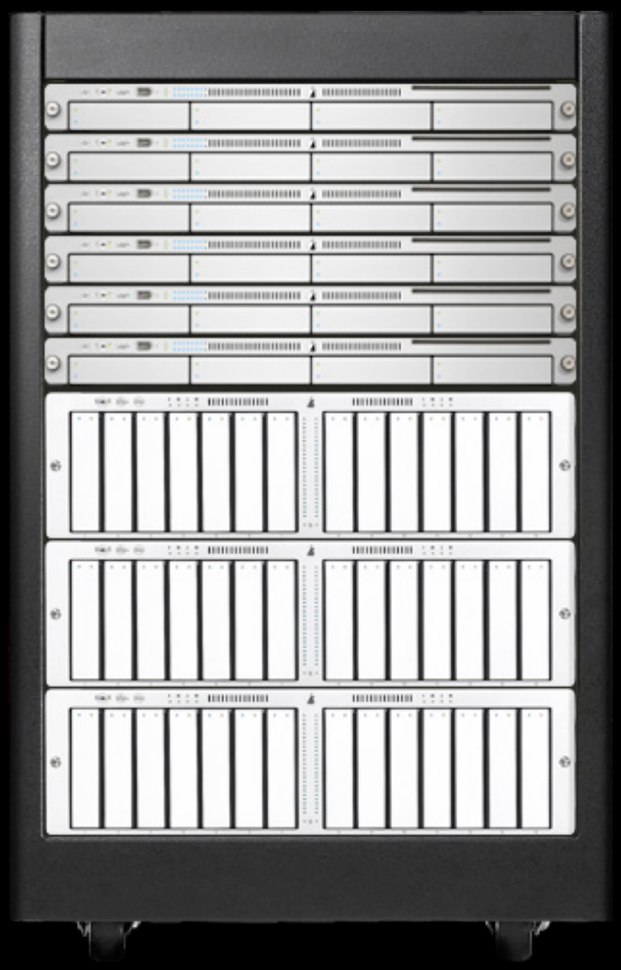
Low-entry cost and ease of use gives Riskwise a competitive advantage

“With Xserve, we can do transaction processing for a fraction of the cost of most credit bureaus. We get the performance and reliability of an enterprise mainframe without the high equipment costs and steep maintenance fees.

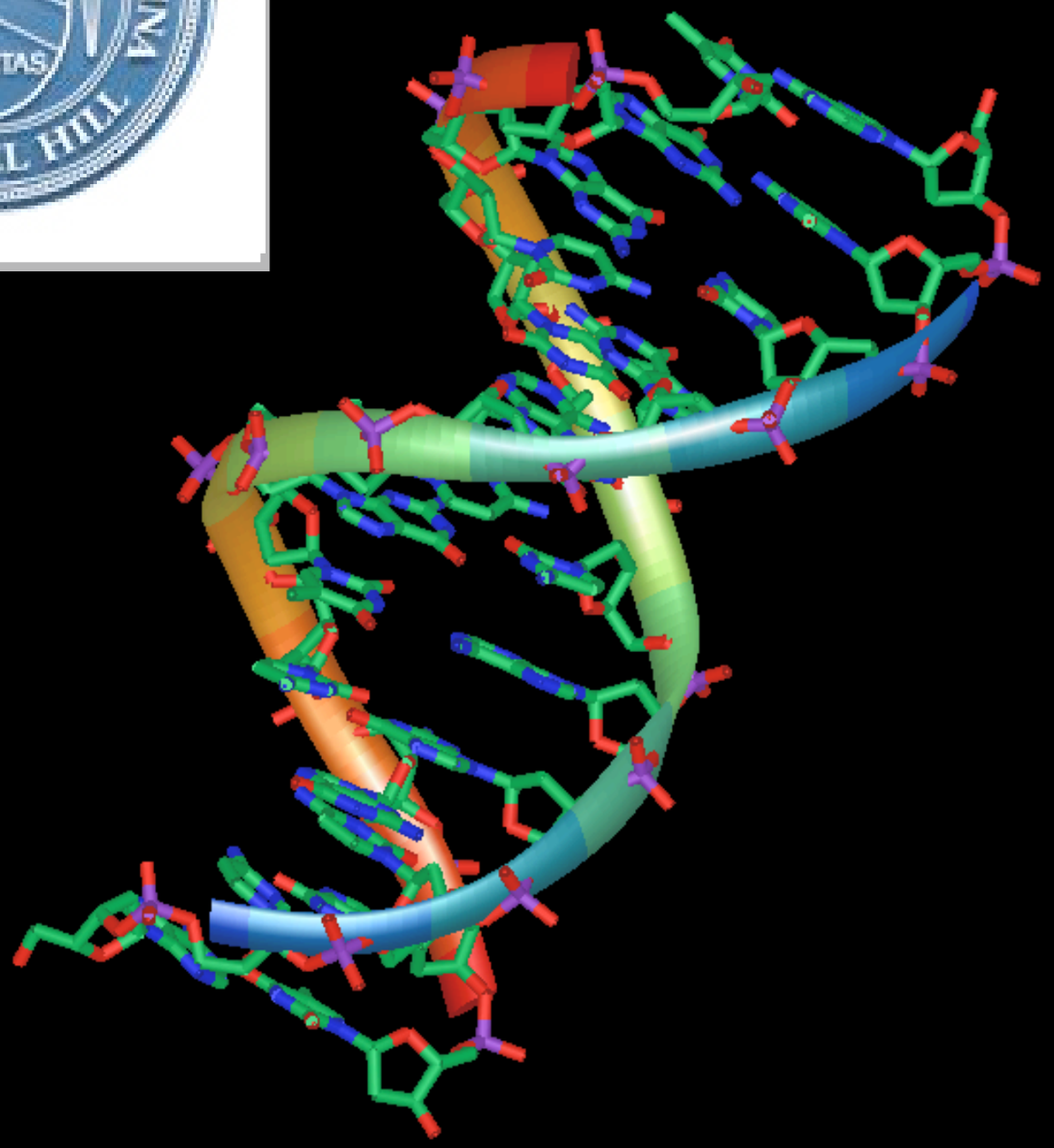
And it’s so easy to manage, one person can administer our entire network.”

Jon Moog, CIO

RiskWise®



UNIVERSITY OF NORTH CAROLINA
LVX
LIBERTAS
CHAPEL HILL



University of North Carolina

Gaining insights on genomes and genome evolution

- 42 Xserve cluster
- Queries performed on thousands of proteins—results delivered in minutes

Simple cluster management and administration lowers the total cost of ownership

“We wanted a plug-and-play solution that was still cost effective yet could meet our computing needs. That’s the place that Xserve and Apple fits in well, especially with the new cluster nodes.”

Michael Giddings, Assistant Professor

UNC Chapel Hill

InfoWorld

Tom Yager

Technical Director
InfoWorld Test Center

Market Trends

- Consolidation
- Commoditization
  - IT starved for purposeful innovation
  - No compelling reason to invest in new equipment or software
- These factors are not tied to the economy

Apple's Impact on the Market

- "Year of the notebook" decimates $2000+ PC notebooks
  - PowerBooks set new standards
- Xserve and Xserve RAID redefine their respective markets
- Mac OS X bundling restores historic benefits of UNIX
- Longevity, ROI, Productivity fit for reduced workforce

Enterprise Objections

- “Mac OS X is not mature”
  - BSD: 1978; Mach: 1985; NeXTSTEP: 1988
- “The hardware is slow”
  - Gigahertz vs. throughput
- “Macs are more expensive than PCs”
  - Not feature for feature, not long term
- “There aren’t enough apps”
  - More in the box, and more to come

Tea Leaves

- IT simplifies requirements
  - Rapid payback, miniscule LTCO, zero lock-in, purposeful innovation, pervasive standards
- Apple adapts strategy to changing requirements
  - Apple's execution based on feedback, anticipation, rapid evolution
  - Quick deployment, easy administration
- Consistent, no compromises

Tea Leaves

- IT manager's confidence in Apple will keep growing
  - Now
    - Stable core niches
  - Near-term
    - Apple is building enterprise presence
      - Notebooks, wireless, scale-out entry servers, LAN storage
  - Long-term
    - Apple will own convergence
    - Human to Human

“Call me when it runs on Mac OS X”

InfoWorld

New Products

Panther
Mac OS X Version 10.3

Mac OS X “Panther” in the Enterprise

Open Standards Networking

NIS Support in Open Directory
NFS file locking
Integrated IPv6
802.11X authentication
Kerberos Mail, AFP, FTP, SMB, SSH
Long Password support
X.509 certificate support

Microsoft Interoperability

Active Directory Integration
Browse SMB servers in Finder
Browse SMB Printing
L2TP/IPsec-based VPN

Introducing Mac OS X Server “Panther”

Introducing Mac OS X Server “Panther”

Our best server release ever

Over 50 new features

Automatic Setup

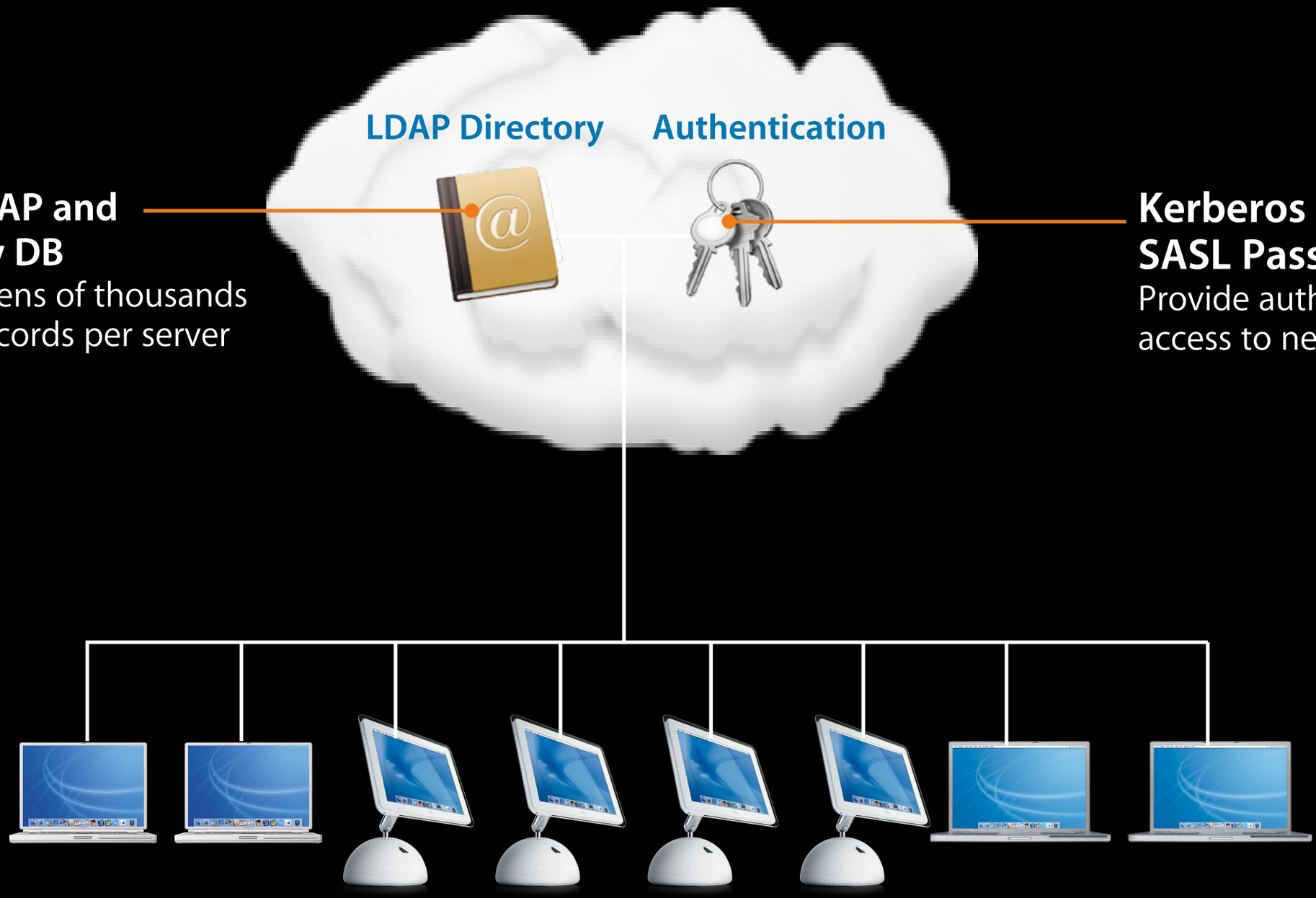
Automatic Setup

The fastest and easiest way to set up a rack of servers

Open Directory 2

Open Directory 2

LDAP directory and Kerberos authentication services

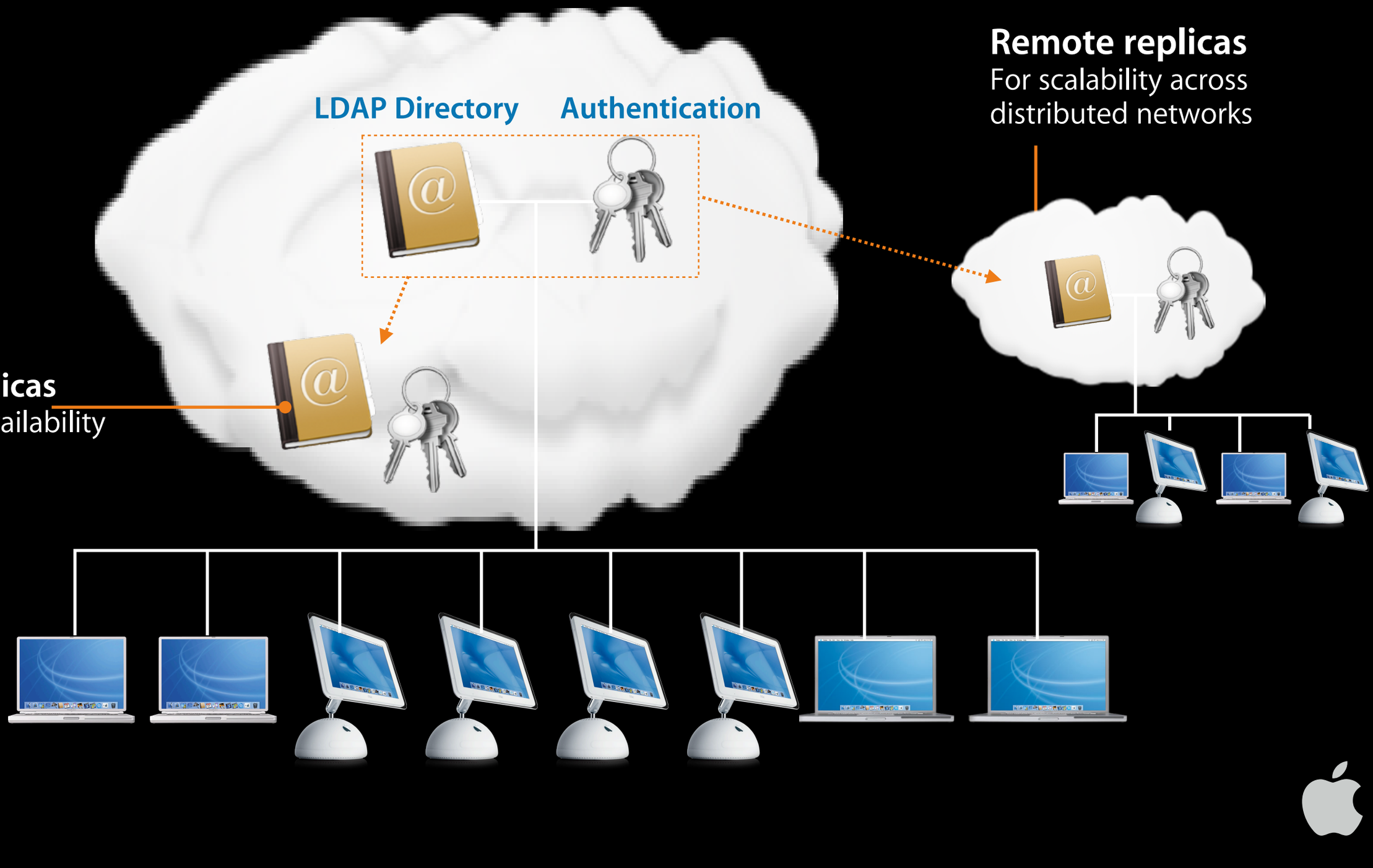


OpenLDAP and Berkeley DB
Support tens of thousands of user records per server

Kerberos KDC and SASL Password Server
Provide authenticated access to network resources

Open Directory 2

Supports replication of directory and authentication



Single Sign-on

Single Sign-On

One password provides secure access to all your services

Kerberos server authenticates user during login

Authenticated user can access all Kerberos-enabled network services

Authentication | Directory | Home | Mail | Group folders | Secure web | SSH

User retains Kerberos “key”

JBoss Application Server

Introducing JBoss on Mac OS X Server

The easiest way to deploy J2EE applications

Server Admin

WebObjects 5.2

App Server Deployment Tools

OpenLDAP® PROJECT

JBoss

Tomcat @ JAKARTA

MySQL™

Java™

Apache

Postfix Mail Server

Postfix Mail Server

Robust, scalable email solutions

High-performance open source Postfix and Cyrus mail services

Webmail

Mail Server

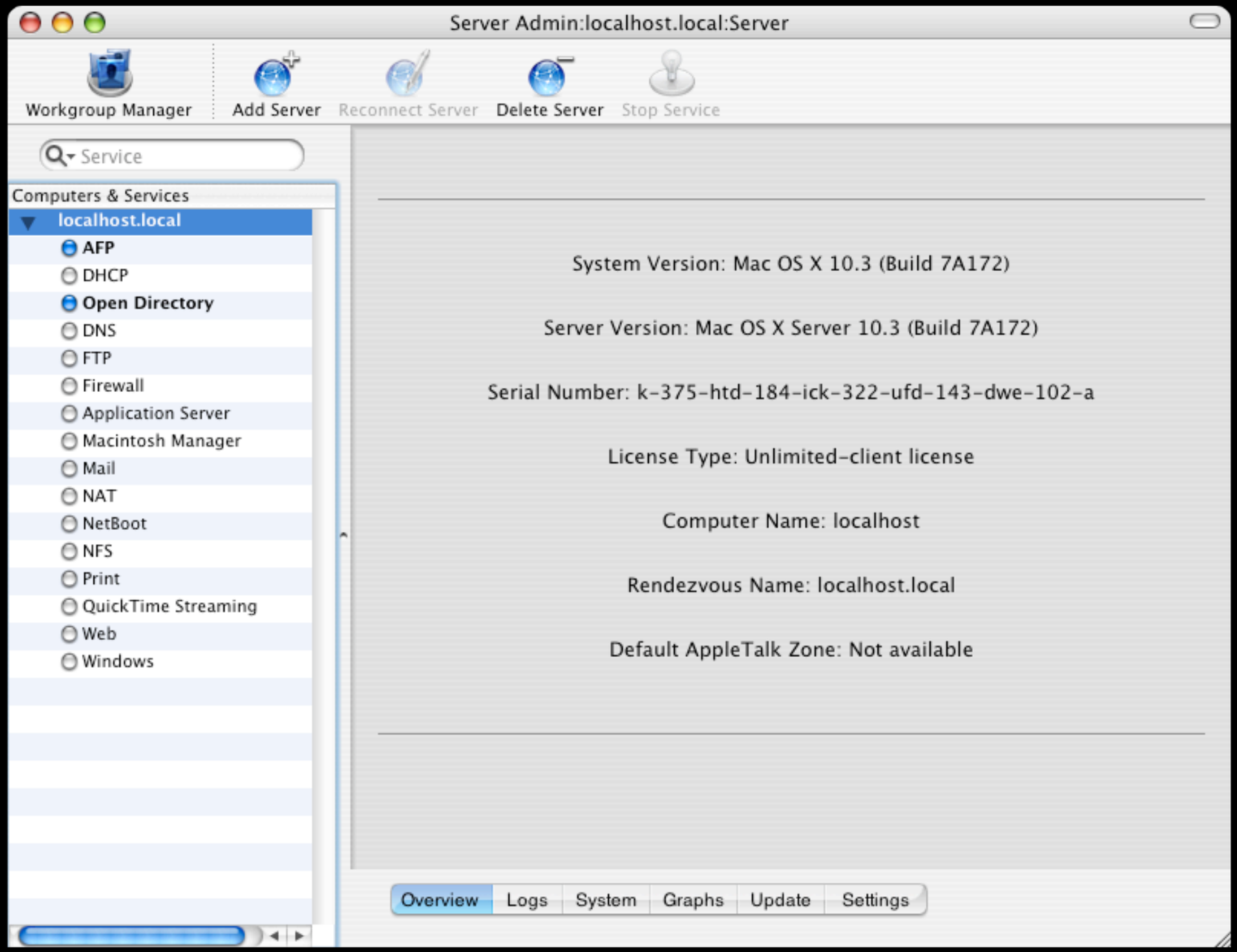
Mailing Lists

Integrated SSL for secure email transport between clients and server

Server Admin

Server Admin

Easy to use server setup and management tools



Demo

Samba 3

Demo

Samba 3

Native support for Windows users

Windows services
Mac OS X Server can host home directories, group folders and roaming profiles for Windows users

Directory

Authentication

Roaming Profiles

Home

Group folders

Printers

Samba 3

Integrated with Open Directory 2

Windows services
Mac OS X Server can host home directories, group folders and roaming profiles for Windows users

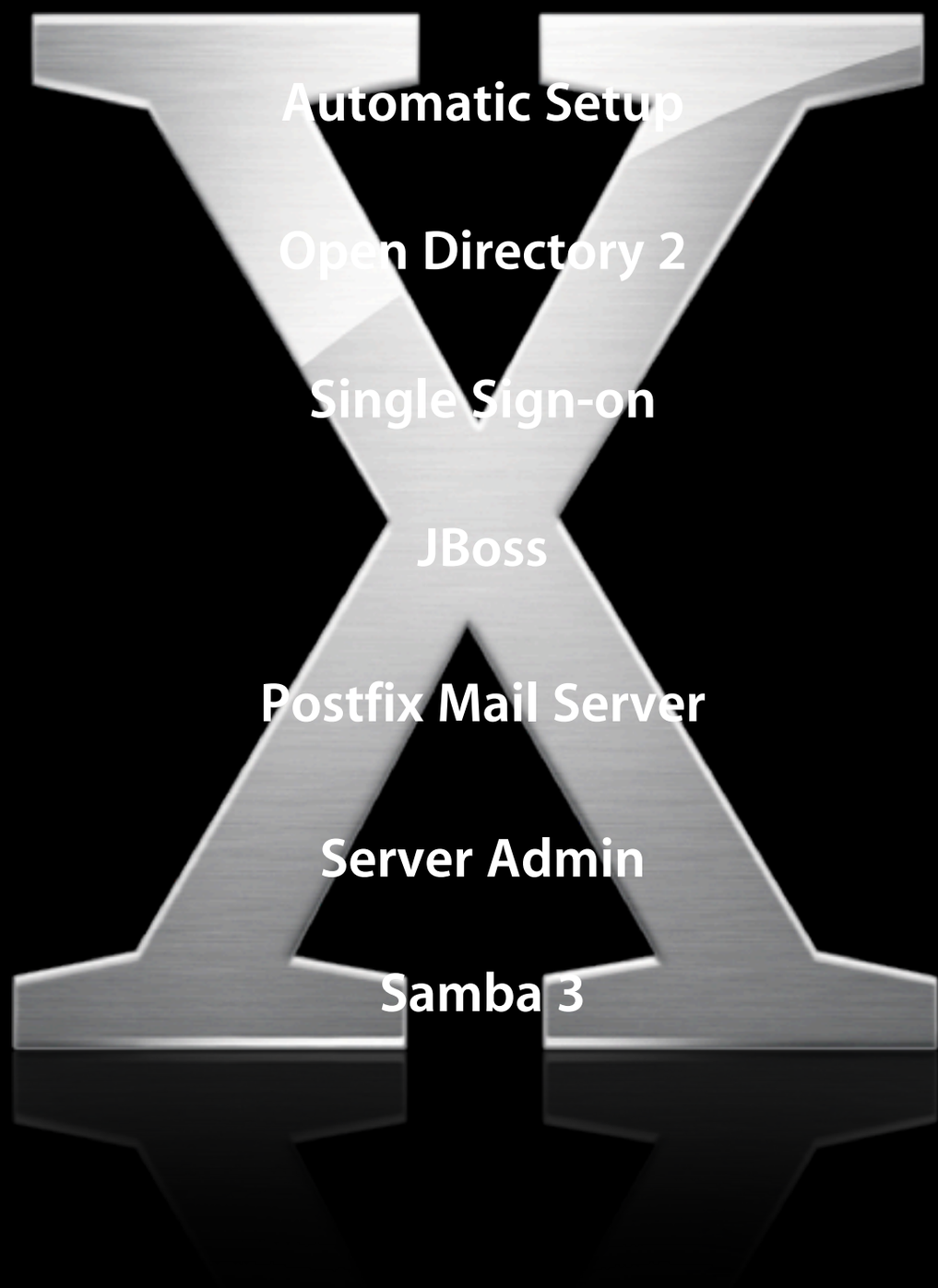
Directory
Authentication
Roaming Profiles
Home
Group folders
Printers

Primary Domain Controller
Windows PDC support in Open Directory enables login and authentication of Windows clients

Introducing Mac OS X Server “Panther”

Introducing Mac OS X Server “Panther”

Over 50 new features



Introducing Mac OS X Server “Panther”

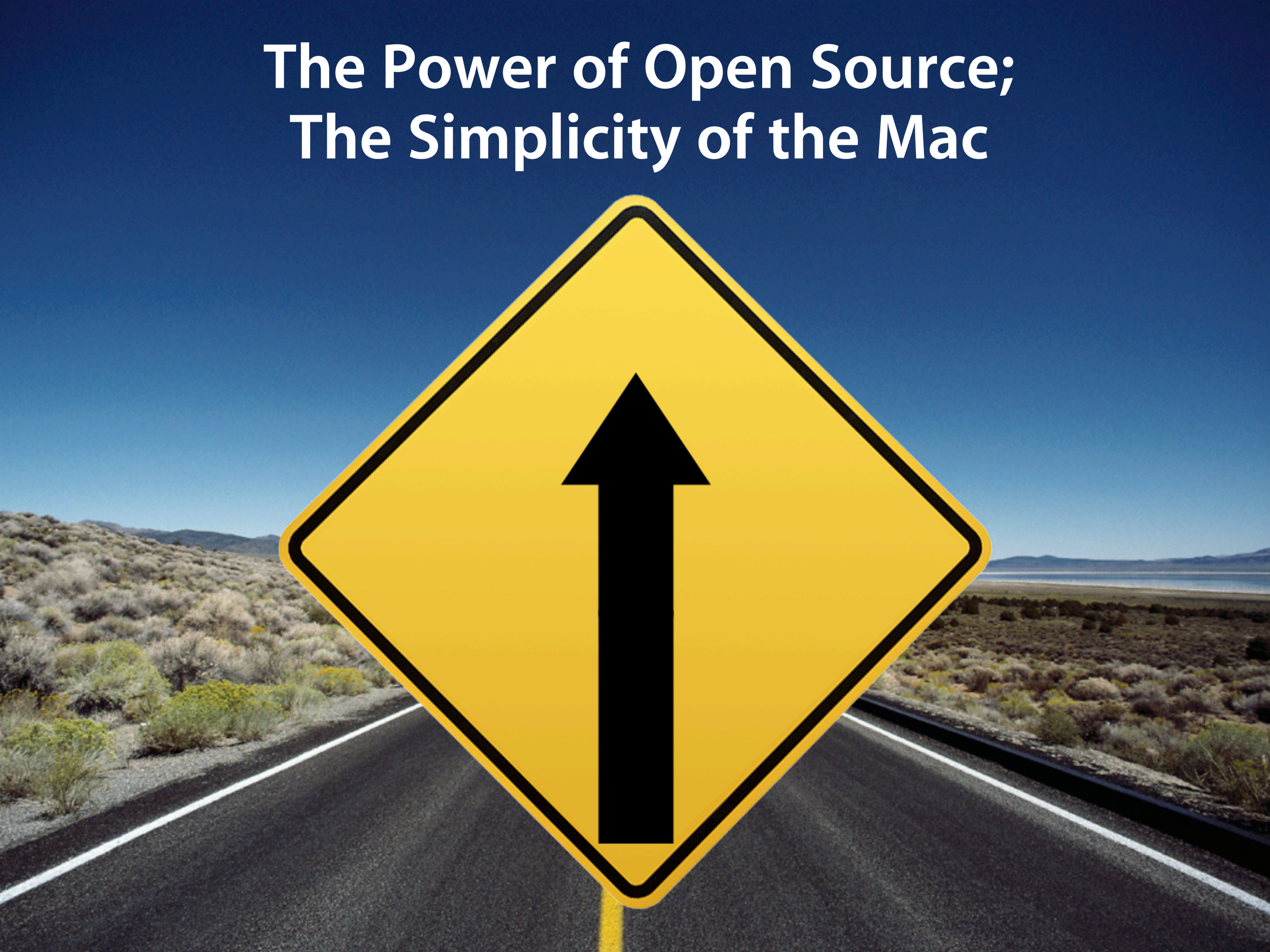
$999, unlimited users

Software Maintenance customers get it automatically

WWDC attendees get a developer preview

IT Technology Decisions

The Power of Open Source; The Simplicity of the Mac



Do Not Miss...

604 Mac OS X Server Overview	The Mission Tuesday, 2:00pm
606 Mac OS X Server In-Depth	The Marina Tuesday, 3:30pm
601 Java Overview/State of the Union	The Mission Monday, 5:00pm
602 WebObjects State of the Union	The Mission Tuesday, 9:00am
621 Deploying Xserve	Russian Hill Thursday, 3:30pm
626 Deploying Xserve RAID	Pacific Heights Friday, 3:30pm

Thank You

Bud Tribble
Vice President Software Technology

WWDC 2003

Worldwide Developers Conference